

MATE-GUARDING IN *EPHYDRA RIPARIA* FALLÉN (DIPTERA: EPHYDRIDAE)

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On 5.viii.1989 at the edge of a saltmarsh pool near Aldeburgh, Suffolk (TM 461546) I found a pair of flies belonging to the family Ephydriidae with the male mounted on the dorsal surface of the female. I took five close-up photographs of these flies, one of which is reproduced here (Plate III Figure 4). While observing the two flies through the viewfinder of the camera I noticed that the male was not *in copula* with the female, but rather riding on her dorsal surface in a posture characteristic of mate-guarding behaviour. After spending perhaps 5 or 10 minutes stalking and photographing the flies, they were captured and subsequently determined as *Ephydra riparia* Fall., using the key by Collin (1963).

A variety of mate-guarding strategies are reviewed by Thornhill & Alcock (1983) including some adopted by members of the Diptera. I have not been able to trace any published references to mate-guarding in Ephydriidae, though observations of mating behaviour in what are typically small flies are likely to be difficult. Recently, Dyte (1988) published a detailed account of mate-guarding in *Hydrophorus oceanus* (Macq.) (Diptera: Dolichopodidae) another saltmarsh species, where the males are much smaller than the females and possess raptorial forelegs which grasp the thorax of the female. Additionally, a male-biased sex ratio was recorded in *H. oceanus*, which is in accordance with other insects which adopt mate guarding behaviour. *Ephydra riparia* does not have any obvious morphological adaptations for mate guarding and the sexes are of a similar size. It would be of interest to investigate the sex ratio in this species and to make more detailed observations of the pre- and post-copulatory behaviour.

REFERENCES

- Collin, J. E. 1963. The British species of *Ephydra* (Dipt., Ephydriidae) *Entomologist's Mon. Mag.* 99: 147-152.
- Dyte, C. E. 1988. Mate guarding and sex ratio in *Hydrophorus oceanus* (Macquart) (Diptera: Dolichopodidae) *The Entomologist* 107: 122-126.
- Thornhill, R. & Alcock, J. 1983. *The evolution of insect mating systems*. Harvard University Press, Cambridge, Massachusetts.

PLATE III.

1-3. Some interesting European spiders. F. M. Murphy. 1991. *Br. J. Ent. Nat. Hist.* 4: 69-76. 1. *Macrothele calpeiana*. 2. *Palpimanus orientalis* eating *Tegenaria agrestis* in the latter's web. 3. *Lycosa tarantula*.

4. Mate-guarding in *Ephydra riparia* Fallen (Diptera: Ephydriidae). I. F. G. McLean. *Br. J. Ent. Nat. Hist.* 4: 65. Pentax ME Super, 100mm f4 Takumar macro lens set at f32, total 150mm extension with +3 diopter close-up lens, Olympus T28 twin-head macro flash, Agfa CT100 colour reversal film.